XVI THE GENERAL EXAMINATION

OSLER AND THE CASE STUDY

William Osler, author of the first modern textbook of medicine in 1892, was responsible for the modern emphasis of learning medicine at the bedside. Osler placed the student at the bedside and kept him on the wards. His instructions were to learn by studying the individual patient, advocating what he called the natural method of teaching, in which the student "begins with the patient, continues with the patient, and ends his studies with the patient, using books and lectures as tools, as means to an end."

Born in Canada in 1849, Osler graduated in medicine from McGill University in 1872 at age 23 and went abroad for 2 years. In London, he made original observations on blood platelets; in Berlin, he attended Virchow's autopsies; and in Vienna, he studied under Rokitansky. Osler returned to Montreal in 1874 at age 25 and joined the faculty of McGill University in Toronto, where he remained for 10 years. His work in this decade was primarily in pathology. He performed 786 autopsies as pathologist of the Montreal General Hospital, about 100 cases a year for 8 years. In 1884, at age 35, Osler accepted the Chair of Clinical Medicine at the University of Pennsylvania where he remained for 5 years, shifting his emphasis to the ward. He moved to Baltimore in 1889 at age 39 to accept the Chair of Medicine at the Johns Hopkins Hospital, and within a year began work on his textbook.

The remarkable feature of *The Principles and Practice of Medicine* (Osler, 1892) is that he is its sole author and that it is based largely on his own clinical and morphologic observations. The two works cited more than any other book are the *Montreal General Hospital Pathological Reports* and the Bible, to which there are many allusions. In 1905 Osler left America to begin work as Regius Professor

of Medicine at Oxford University, England. A year after the death of his only son in World War I, Osler died in 1919.

His own writings demonstrate the importance he placed on study of the single patient. Before his textbook appeared in 1892, Osler had already published over 200 brief reports of single clinical or necropsy cases. He believed that in each patient, "there is something to be found out; and in each case, however trivial, there is something novel." Osler recognized that theoretical teaching in medicine is inadequate, that the student must learn at the bedside.

> *It is not hard, for example, to teach him all about the disease pneumonia, how it prevails in the winter and spring, how fatal it always has been, all about the germ, all about the change which the disease causes in the lungs and in the heart—he may become learned, deeply learned on the subject—but put him beside a case, and he may not know which lung is involved, as he does not know how to find out, and if he did find out, he might be in doubt whether to put an ice bag or a poultice on the affected side, whether to bleed or to give opium, whether to give a dose of medicine every hour or none at all, and he may not have the faintest notion whether the signs look ominous or favourable. . . . He does not see the pneumonia case in the amphitheater from the benches, but he follows it day by day, hour by hour; he has his time arranged that he can follow it; he sees and studies similar cases, and the disease itself becomes his chief teacher, and he knows its phases and variations as depicted in the living; he learns under skilled direction when to act and when to refrain; he learns insensibly principles of medicine, and he possibly escapes a nickle-in-the-slot attitude of mind, which has been the curse of the physician in the treatment of disease. (Osler, 1985)*

Osler believed that the art of medicine was observation and that it is an art difficult to acquire. He wrote:

> *Let not your conceptions of the manifestations of disease come from words heard in the lecture room or read from the book. See, and then reason and compare and control. But first see. No two eyes see the same thing. No two mirrors give forth the same reflection. Let the ward be your slave and not your master. Live in the ward. (Osler, 1985)*

Osler emphasized that the quality of observation is not always proportionate to the quantity of cases observed, that acquisition of experience and knowledge is not dependent on a large hospital and a large number of cases. He stressed the study of single patients.

> *Each case has its lesson—a lesson that may be but is not always, learnt, for clinical wisdom is not the equivalent of experience. A man who may have seen 500 cases of pneumonia may not have the understanding of the disease which comes with an intelligent study of a score of cases, so different are knowledge and wisdom, which, as the poet truly says, "far from being one, have ofttimes no connexion." (Osler, 1985)*

—CHARLES STEWART ROBERTS

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209 An Overview of the General Examination

W. DALLAS HALL

Symptoms and signs elicited from the general aspects of the history and physical examination are the first signals that alert clinicians toward specific findings that help make diagnoses. The instruments necessary for this examination include only weight scales, a thermometer, and a reflex hammer (Table 209.1). A sharp eye and a keen mind, however, are more valuable than all the instruments in the medical bag. The following comments provide a framework on which the more detailed general examination may be viewed (Table 209.2).

Weight Change (Chapter 210). Significant involuntary weight loss usually means a decrease in body weight of 5 to 7% over 6 months or less (Marton et al., 1981; Holdcroft, 1988). Weight loss due to malignancy is almost always associated with anorexia, whereas weight loss due to hyperthyroidism occurs despite an enormous appetite. Weight changes of 1.5 to 3.5 kg are not infrequent after starting or discontinuing diuretic therapy.

Fever, Chills, and Night Sweats (Chapter 211). Most abrupt changes in body temperature are associated with sweating and a sensation of chilliness. Hard, teeth-rattling, shaking chills, however, usually occur only with bacterial, rickettsial, or malarial infections.

Dizziness (Chapter 212). Most patients with dizziness or vertigo have either inner ear disease, orthostatic hypotension, or no definable cause. Cardiac arrhythmias and transient ischemic attacks involving the posterior circulation are much less frequent causes.

Weakness and Fatigue (Chapter 213). Weakness and fatigue, like dizziness, are two of the most common patient complaints. Unfortunately, these symptoms are very nonspecific and can be caused by conditions that range from anxiety or depression to metastatic cancer.

A complaint of weakness becomes much more specific when it is either localized or has a temporal profile. For example, weakness in one arm or leg or weakness that is localized specifically to the proximal musculature (brushing hair, getting out of a chair, etc.) almost always has a neurologic cause. In contrast, weakness that occurs postprandially is often a clue to reactive hypoglycemia, postprandial hypotension, or familial periodic paralysis.

Allergic Drug Reactions (Chapter 214). Allergies to peni-

Table 209.1
Instruments Needed for the General Examination

Weight scales
Thermometer
Reflex hammer

Table 209.2
Major Diagnostic Considerations for Some Common Symptoms in the Patient History

Symptom	Major diagnostic considerations	Chapter
Weight loss	Malignancy	210
	Hyperthyroidism	
	Depression	
Fever/chills	Bacterial infection	211
Dizziness	Inner ear disease	212
	Orthostatic hypotension	
	Cardiac arrhythmias	
	Posterior circulation TIA	
Weakness/fatigue	Depression	213
	Endocrine disorder	
	Metabolic disorder (e.g., hypokalemia, diabetes)	
	Neurologic disorder	
Impotence	Depression/anxiety	216
	Alcoholism	
	Diabetes	
	Drug-induced	

Table 209.3
Examples of Initial Diagnostic Clues from the Patient's General Appearance

Clinical feature	Major diagnostic considerations
Cachexia	Advanced malignancy
Asthenic and fidgety with prominent eyes, pulsatile carotid arteries, and full anterior neck	Hyperthyroidism
Rapid, shallow respirations	Pneumonia; pulmonary embolus
Horizontal earlobe crease	Coronary artery disease
Lateral periorbital fullness	Alcoholism or diabetes (with enlarged lacrimal glands)
Unilateral brownish discoloration of fingers	Smoking; lung cancer; chronic obstructive pulmonary disease
Nail abnormalities	
Muehrcke lines	Chronic illness (e.g., nephrotic syndrome)
Clubbing	Lung cancer; congenital heart disease; etc.
Onycholysis	Hyperthyroidism
Half-and-half nails	Chronic renal failure
Pitting	Psoriasis
Periungual erythema	Collagen vascular disease
Gray–black discoloration	Past chemotherapy
Pill-rolling tremor of hand; shuffling gait	Parkinson's disease
Protuberant abdomen with full flanks	Ascites
Syndactyly	Congenital heart disease (Holt–Oram syndrome, etc.)
	Pheochromocytoma phenotype

cillins and sulfa-containing drugs are common. Clarify the nature of the reaction (e.g., anaphylaxis, rash, vomiting) and define whether the supposed allergy is a "history of . . ." or an unequivocal reaction.

Family History (Chapter 215). A key element of the family history is whether parents or siblings have had manifestations of coronary artery disease before the age of 55 years.

A positive family history of diabetes in both parents predestines the individual to be diabetic. A positive family history of hypertension in both parents (vs. only one parent) is associated with an average onset of hypertension 10 years earlier in the offspring.

A family history of certain uncommon conditions is often an immediate hint to interpretation of patient complaints. A few examples would include polycystic kidney disease, pheochromocytoma, collagen vascular diseases, or cystinuria.

Sexual History (Chapter 216). Impotence is the dominant symptom of the sexual history in men. It is most often associated with depression, anxiety, alcoholism, or diabetes, but can also be induced by many drugs.

The sexual history has undergone a fundamental change since the emergence of AIDS. Individuals at high risk of exposure to the AIDS virus should be questioned explicitly about their pattern of sexual behavior.

General Appearance (Chapter 217). Often the most informative part of the entire clinical examination is the general appearance of the patient. An astute clinician uses the overall patient appearance, gleaned in the first 60 seconds of the interview, to catalogue his or her first set of diagnostic possibilities. Table 209.3 lists eleven examples of immediate diagnostic clues from the general appearance of the patient.

References

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